Nutrition

Study Group Module

**Learning Objectives**

Review the following Learning Objectives as an organized beginning to your study of this module. As you read the Learning Objectives, note key words which will aid you in finding the information in the texts. When you complete the module, revisit this list and check for areas that require further investigation.

* Understand how foods nourish the body.
* Define kilocalorie.
* Identify the six nutrients necessary in the diet.
* Identify the eight essential amino acids.
* Identify nutritional sources of proteins, fats and carbohydrates.
* Identify the critical differences between unsaturated fat, saturated fat, and trans-fats.
* Identify daily dietary requirements of proteins, fats and carbohydrates.
* Identify the guidelines for combining foods for complete protein.
* Identify fat soluble vitamins and the daily intake limits of each.
* Establish a basic understanding of a variety of nutritional systems or eating habits: lacto-ovo vegetarian, vegan vegetarian, macrobiotic, ethnic foods, whole foods, organic foods, meat and processed foods.
* Identify the importance of B-12 in the vegan diet.
* Understand how stress blocks the absorption of nutrients from the diet.
* Identify how some nutrients compete for binding sites and physiologic utilization.
* Demonstrate your understanding of a nutritional diet.
* Identify when vitamin supplements are appropriate.
* Identify the social services available in your area to provide food to pregnant and breastfeeding women.
* Draft practice guidelines for nutritional counseling with your own clients.
* Create nutritional reference sheets for client use.
* Demonstrate appropriate dietary counseling for clients within the context of your preceptor’s practice.

**Study Sources**

The following texts are recommended for completion of this module. Use them to cross reference and build a more comprehensive understanding.

Using key words from the Learning Objectives, search the index. Read those pages listed, and read the chapter in which they are found. Establish a context for the information so that you understand how other topics are related. In addition, read the chapter headings in the Table of Contents, and flip through each text to familiarize yourself with the content of chapters. As you work through Study Group modules, you will eventually read each text in its entirety. (the exception is Nutrition Almanac which is useful primarily for digestive physiology and nutrition content).

* Nutritional Almanac, Kirschmann
* Holistic Midwifery, Vol. I, II, III (when available), Frye
* Varney’s Midwifery
* Human Anatomy and Physiology, Marieb
* The Natural Pregnancy Book, Romm
* Our Bodies, Ourselves, Boston Women’s Health Book Collective
* Breastfeeding: A Guide for the Medical Professional, Lawrence & Lawrence

**Related Topics**

* Anemia
* Digestion
* Liver
* Fetal growth patterns
* Maternal weight gain
* Pregnancy ailments
* Post partum depression
* Perineal healing

Nutrition Questions

1. What is a kilocalorie?
2. List the six nutrients required in every diet.
3. What three functions do these six nutrients achieve?
4. What are enzymes and what do they do?
5. What is a positive nitrogen balance?
6. Name the fat-soluble vitamins.
7. How are fat-soluble vitamins measured?
8. What does ‘fat-soluble’ mean?
9. What must you be aware of with fat soluble vitamins?
10. What non-food source provides the body with vitamin D?
11. What do B vitamins accomplish in the body?
12. Describe the necessary content of a B-Complex vitamin supplement.
13. What food sources contain vitamin B-12?
14. What does vitamin C accomplish in the body?
15. How long is vitamin C stored in the body?
16. What does vitamin K accomplish in the body?
17. What do minerals accomplish in the body?
18. What are the macrominerals?
19. How are macrominerals measured?
20. What other group of minerals is utilized by the body and needed from the diet? How are they measured?
21. How much calcium does a pregnant woman need in her diet?
22. How much magnesium does a pregnant woman need in her diet?
23. How much phosphorous does a pregnant woman need in her diet?
24. How much iron does a pregnant woman need in her diet?
25. How much protein does a pregnant woman need in her diet?
26. Where does iron exist in the body?
27. What must accompany iron for it to achieve its tasks?
28. What does iron accomplish in the body?
29. What is the difference between saturated and unsaturated fats?
30. Give healthy guidelines for the consumption of cooking oils and fats.
31. List the essential amino acids.
32. What is the necessary content of a complete protein?
33. What could be added to the following to create a complete protein?

corn

wheat

rice

lentils

pinto beans

green beans

soybeans

1. What effect does stress have on the absorption of nutrition from the foods eaten?
2. What do lacto-ovo vegetarians eat?
3. What do vegan vegetarians eat?
4. List the dietary practices that do not include the eating of pork.
5. What does a craving for sugary foods often indicate?
6. What is “pica”?
7. What does pica indicate?

**Essay**

1. How do you decide if your client is getting enough protein? Calories?
2. How do you assess whether your client is a candidate for prenatal vitamins?
3. Your client has been very moody, cranky and tearful. When she brings her diet journal, she also tells you that 5 years ago she took a vegetarian vow at her temple. The vow prohibits her from eating meat of any kind, garlic and onions. As you review her diet together, you notice that she has fruit juice several times a day, cereal in the morning, cookies in the afternoon and ice cream before bed. She eats a light lunch, usually a salad with saltine crackers. Her dinner includes some green vegetables but mostly potatoes or pasta which are both covered with cheese. What is your advice to her?
4. What is a macrobiotic diet?
5. Discuss the benefits of eating whole foods. Give some examples of a whole foods diet.
6. Discuss the nutritional benefits of organic foods.

**Projects**

(send completed projects with the rest of your course work for this module)

Nutrition Chart for Clients create a practical list or chart for reference showing the nutritional needs during pregnancy and breastfeeding, and foods in which they are most abundant. Include a few details of the benefits of each nutrient.

**Self Awareness projects**

Keep a diet journal for yourself for one week.

a. What changes can you make to improve your own nutrition?

b. Did you notice an increased awareness of what you were eating (and possibly why you were eating it) as you kept your diet journal?

c. Did this bring up any issues for you? What did you learn about yourself and your diet?

d. Did recording what you were eating have an effect on the foods you chose to eat?

e. How do you think this experience will help you in your counseling with other women regarding their diets?

**Commercial Vitamin Supplement Assessment**

Select one or two commercial vitamin brands (a good comparison would be a one a day type and a four or six a day type) and using the tables in the Nutrition Almanac decide what you think of their particular formulas. Choose a vitamin supplement to recommend to clients who would benefit.Research the state and federal programs available in your area to aid in providing food to pregnant and breastfeeding women. Identify the qualifications for receiving support and the local contact information. Create a referral list to provide for your clients.

**Skills**

Following are excerpts from the NMI forms for assessment of midwifery skills, which include all skills identified and required by NARM. Review the following skills and consider how they each relate to the content of this module. If you are currently working with a preceptor, take this opportunity to focus on these areas. During Supervised Primary Care you will formally evaluate these skills together using the NMI form Preceptor Evaluation/Student Self-Assessment of Midwifery Skills.

2. General Health care Skills:

 J. Recommends the use of vitamin and mineral supplements

 1. Prenatal Multi-Vitamin, 2. Vit. C, 3. Vit. E, 4. Folic Acid, 5. B-Complex, 6. B-6, 7. B-12, 8. Iron,9. Calcium, 10. Magnesium

3. Maternal Health Assessment:

 K. Recognizes and responds to potential prenatal complications by:

 1.Identifying pregnancy-induced hypertension

 2. Assessing, educating and counseling for pregnangy-induced hypertension with:

 a) Nutrition/hydration assessment,

 b) Administration of calcium/magnesium supplement

 c) Stress assessment and management,

 d) Non-allopathic remedies,

 e) monitor for signs and symptoms of increased severity,

 f) Assessment for drug abuse, g)increased frequency of maternal assessmnts

 3. Identifying preeclampsia

 4. Collaborating and managing preeclamptic mothers

 8. Identifying and dealing with pre-term labor with:

 B) Consultation and/or treatment including:

 1) Increase of fluids,

 2) Non-allopathic remedies,

 3) Discussion of the mother’s fears,

 4) Food to be eaten at least every two hours,

 5) consumption of alcoholic beverage,

 6) Evaluation of urinary tract infection,

 7) Evaluation of maternal infection

4. Labor, Birth and Immediate Postpartum

 F. Assesses general condition of mother and newborn by:

 8. Facilitating breastfeeding by assisting and teaching about:

 a) positioning for mother and baby,

 b) skin-to-skin contact,

 c) latching on,

 d) adequate maternal hydration,

 e) adequate maternal nutrition, adequate maternal rest,

 g) feeding patterns,

 h) maternal comfort measures for engornement,

 i) letdown reflex,

 j) milk expression

5. Postpartum

 G. Performs maternal four- to six-week post-partum chech-up assessing for:

 1. Post partum subjective history

 2. Lochia

 3. Return of menses

 4. Physical condition by performing an examination including assessment of: a) vital signs,

 b) systems function,

 c) breastfeeding, condition of breast and nipples,

 d) muscle prolapse of vagina and rectum (cystocele, rectocele, etc.), e) strength of pelvic floor,

 f) condition of uterus, ovaries and cervix,

 g) condition of the vulva, vagina, perineum and anus